

CLAIMS

WHAT IS CLAIMED IS:

1. An XML system configured to facilitate printing of bar code labels, tags, tickets, cards, or other media, and/or encoding of RFID devices embedded in media, based upon an extensible markup language (XML) input data stream, the XML system comprising:
 - a computer system having
 - a memory subsystem;
 - a communication interface operatively coupled to a network;
 - an XML processor configured to receive and process the XML input data stream;
 - an extensible stylesheet language transformation (XSLT) processor configured to either obtain a stylesheet identified in the XML data stream or obtain the stylesheet from a stylesheet repository, the XSLT processor transforming data in the XML input data stream into transformed XML data based upon the stylesheet obtained;
 - an extensible stylesheet language formatting object (XSLFO) processor configured to format the transformed XML data into formatted XML data based upon XSLFO instructions contained in the stylesheet; and
 - a rendering subsystem configured to receive the formatted XML data and generate a printable representation of the bar code label, tag, ticket, card, other media, and/or generate encoding information for an RFID device.
2. The system according to claim 1 further including a printer subsystem operatively coupled to the XML system, the printer subsystem configured to print the bar code labels, tags, tickets, cards, or other media.

3. The system according to claim 1 further including a printer/encoding subsystem operatively coupled to the XML system, the printer/encoding subsystem configured to print the bar code labels, tags, tickets, cards, or other media and/or configured to encode the RFID devices embedded in media.

4. The system according to claim 1 further including an encoding subsystem operatively coupled to the XML system, the encoding subsystem configured to encode the RFID devices embedded in media.

5. The system according to claim 1 wherein the printable representation and/or the encoding information is in a format selected from the group consisting of JPEG, PNG, SVG, and data file.

6. The system according to claim 1 wherein validation of a portion of the XML data stream is performed according to a Document Type Definition (DTD).

7. The system according to claim 1 wherein an external source transmits a request to the XML system to generate a representation of the barcode label, tag, ticket, card or other media.

8. The system according to claim 1 wherein an external source transmits a request to the XML system to generate encoding instructions for an RFID device.

9. An XML system configured to facilitate printing of bar code labels, tags, tickets, cards, or other media, and/or encoding of RFID devices embedded in media, based upon an extensible markup language (XML) input data stream, the XML system comprising:

a computer;

a memory subsystem;

an XML processor configured to receive and process the XML input data stream;

an extensible stylesheet language transformation (XSLT) processor configured to either obtain a stylesheet identified in the XML data stream or obtain the stylesheet from a stylesheet repository, the XSLT processor transforming data in the XML input data stream into transformed XML data based upon the stylesheet obtained;

an extensible stylesheet language formatting object (XSLFO) processor configured to format the transformed XML data into formatted XML data based upon XSLFO instructions contained in the stylesheet; and

a rendering subsystem configured to receive the formatted XML data and generate a printable representation of the bar code label, tag, ticket, card, other media, and/or generate encoding information for an RFID device.

10. The system according to claim 9 wherein the memory subsystem facilitates transmission of the XML input data stream to the XML processor.

11. The system according to claim 9 wherein the memory subsystem is configured to access memory storage containing the XML input data stream.

12. The system according to claim 11 wherein the memory storage is selected from the group consisting of RAM, EPROM, flash memory, dynamic memory, static memory, FIFO (first-in first-out) memory, LIFO (last-in first-out) memory, circular memory, semiconductor memory, bubble memory, buffer memory, disk memory, optical memory, and cache memory.

13. The system according to claim 9 wherein the XML processor obtains schema identified in the XML data stream, the schema configured to facilitate validation of a portion of the XML data stream.

14. The system according to claim 13 wherein the schema is stored in a repository separate from the computer or memory subsystem, and is obtained remotely via a communication network.
15. The system according to claim 13 wherein the schema is stored in the memory subsystem.
16. The system according to claim 9 wherein validation of a portion of the XML data stream is performed according to a Document Type Definition (DTD).
17. The system according to claim 9 wherein the stylesheet is stored in a repository separate from the computer or memory subsystem, and is obtained remotely via communication network.
18. The system according to claim 9 wherein the stylesheet is stored in the memory subsystem.
19. The system according to claim 9 wherein the printable representation and/or the encoding information is in a format selected from the group consisting of JPEG, PNG, SVG, and data file.
20. An XML system configured to facilitate printing of bar code labels, tags, tickets, cards, or other media, and/or encoding of RFID devices embedded in media, based upon an extensible markup language (XML) input data stream, the XML system comprising:
 - a computer;
 - a memory subsystem;
 - an XML processor configured to receive transformed XML data;

an extensible stylesheet language formatting object (XSLFO) processor configured to format the transformed XML data into formatted XML data based upon XSLFO instructions contained in the stylesheet; and

a rendering subsystem configured to receive the formatted XML data and generate a printable representation of the bar code label, tag, ticket, card, other media, and/or generate encoding information for an RFID device.

21. The system according to claim 20 further including an extensible stylesheet language transformation (XSLT) processor configured to either obtain a stylesheet identified in an XML data stream or obtain the stylesheet from a stylesheet repository, the XSLT processor transforming data in the XML input data stream into transformed XML data based upon the stylesheet obtained.

22. The system according to claim 20 wherein the XML processor is configured to receive and process an XML input data stream, and obtain schema identified in the XML data stream from a schema repository, the XML processor validating the XML data stream based upon the schema obtained.

23. A computer readable memory or data storage means encoded with data representing a computer program for an XML system, the XML system configured to facilitate printing of bar code labels, tags, tickets, cards, or other media, and/or encoding of RFID devices embedded in media, based upon an extensible markup language (XML) input data stream, the computer readable memory or data storage means comprising:

processing means having a memory subsystem operatively coupled thereto;

means for receiving and processing the XML input data stream;

means for transforming configured to obtain a stylesheet identified in the XML data stream or obtain the stylesheet from a stylesheet repository, the means for transforming configured to transform data in the XML input data stream into transformed XML data based upon the stylesheet obtained;

means for formatting configured to format the transformed XML data into formatted XML data based upon XSLFO instructions contained in the stylesheet; and

means for rendering configured to receive the formatted XML data and generate a printable representation of the bar code label, tag, ticket, card, other media, and/or generate encoding information for an RFID device.

24. For use in a barcode and/or RFID apparatus, an XML processing system comprising:

a computer system operatively coupled to the barcode or RFID apparatus;

the computer system further including

an XML processor configured to receive and process an XML input data stream;

an extensible stylesheet language transformation (XSLT) processor configured to either obtain a stylesheet identified in the XML data stream or obtain the stylesheet from a stylesheet repository, the XSLT processor transforming data in the XML input data stream into transformed XML data based upon the stylesheet obtained;

extensible stylesheet language formatting object (XSLFO) processor configured to format the transformed XML data into formatted XML data based upon XSLFO instructions contained in the stylesheet; and

a rendering subsystem configured to receive the formatted XML data and generate a printable bit map representation of bar code label, tag, ticket, card, or other media, and/or generate encoding information for an RFID device.

25. A method for generating a bar code label, tag, ticket, card, and/or encoding RFID devices embedded in media, in an XML system adapted based upon an extensible markup language (XML) input data stream, the method comprising:

processing the XML input data stream by an XML processor;

obtaining a stylesheet either identified in the XML data stream or obtained from a stylesheet repository or other external source;

transforming data in the XML input data stream into transformed XML data using an extensible stylesheet language transformation (XSLT) processor based upon the stylesheet obtained;

formatting the transformed XML data into formatted XML data using an extensible stylesheet language formatting object (XSLFO) processor based upon XSLFO instructions contained in the stylesheet;

generating a printable representation of the bar code label, tag, ticket, card or other media, and/or generating encoding information for an RFID device, using a rendering subsystem based on the formatted XML data, the rendering subsystem processing a barcode-type or RFID-type instream foreign object defined in the stylesheet; and

printing or transmitting for printing, the printable representation of the bar code label, tag, ticket, card or other media and/or transmitting the encoding instructions to the RFID device.